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**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE  
STATE OF CALIFORNIA**

Order Instituting Rulemaking Regarding  
Building Decarbonization.

R.19-01-011

**SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) REPLY COMMENTS**  
**ON PHASE II AMENDED SCOPING MEMO AND RULING OF ASSIGNED**  
**COMMISSIONER**

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**Dated: October 16, 2020**

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**TABLE OF CONTENTS**

<b>Section</b>	<b>Page</b>
I. INTRODUCTION .....	1
II. DISCUSSION.....	1
A. Incentive Layering Should Focus on Moving the Market and Decarbonizing the Grid.....	1
B. Wildfire and Natural Disaster Resiliency Rebuild (WNDRR) Program.....	2
1. SCE disagrees with Southern California Gas Company’s (SoCalGas’) and Pacific Gas and Electric Company’s (PG&E’s) position that natural gas Cap-and-Trade proceeds is an inappropriate source of funding for the WNDRR program. ....	2
2. SCE disagrees with SoCalGas’ Reasons for Including Gas Alternatives in the WNDRR Program. ....	4
3. SCE supports multiple parties’ positions to limit gas participation in WNDRR program.....	9
4. SCE agrees with PG&E that the Commission should allow IOUs to issue a contract for 2021. ....	9
C. Providing an Incremental Baseline Allowance to Customers with Electric Water Heating is Statutorily Permissible. ....	10
III. CONCLUSION.....	12

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**I.**

**INTRODUCTION**

Pursuant to Rule 6.2 of the California Public Utilities Commission (CPUC or Commission) Rules of Practice and Procedure, Southern California Edison Company (SCE) respectfully files these Reply Comments on the August 25, 2020 Phase II Amended Scoping Memo and Ruling of Assigned Commissioner Ruling (R.)19-01-011.

**II.**

**DISCUSSION**

**A. Incentive Layering Should Focus on Moving the Market and Decarbonizing the Grid.**

SCE agrees with the Natural Resources Defense Council (NRDC)/Sierra Club, Recurve, Sacramento Municipal Utility District (SMUD), and Vermont Energy Investment Corporation (VEIC) that the Commission should support creating a long-term and consolidated market transformation framework for decarbonization interventions.<sup>1</sup> SCE agrees with SMUD

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<sup>1</sup> NRDC/Sierra Club Comments pp. 1-4, SMUD Comments p. 3, VEIC Comments, pp. 3-5.

that the Commission should utilize funding to enhance existing programs that are already established and working well, rather than divert funds to enforce onerous controls to safeguard against double-dipping in incentives, which will distract the ultimate goal of decarbonization.<sup>2</sup> SCE maintains that a workshop process is worthwhile to further explore how incentives can be combined and layered. SCE also agrees with NRDC/Sierra Club that the Commission should avoid creating an overly rigid formula that may unnecessarily hinder program participation and technology adoption.<sup>3</sup> In addition, SCE supports the incentive layering proposal as an interim solution, and agrees with Recurve and VEIC that a long-term, consolidated market transformation framework is needed to reach the State's decarbonization goals.<sup>4</sup>

**B. Wildfire and Natural Disaster Resiliency Rebuild (WNDRR) Program**

**1. SCE disagrees with Southern California Gas Company's (SoCalGas') and Pacific Gas and Electric Company's (PG&E's) position that natural gas Cap-and-Trade proceeds is an inappropriate source of funding for the WNDRR program.**

SCE disagrees with SoCalGas' assertion that the Commission could be impinging on the regulatory compact because it would violate California Code of Regulations (CCR) § 95893(d)(3).<sup>5</sup> SoCalGas claims that because CCR § 95893(d)(3) states that the allocated allowance proceeds must be used primarily to benefit retail natural gas ratepayers of each natural gas supplier, Staff Proposal's use of funds for an all-electric program would violate the CCR.

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<sup>2</sup> SMUD Comments, p. 3.

<sup>3</sup> NRDC/Sierra Club Comments, p. 1.

<sup>4</sup> Recurve Comments pp. 1-6, VEIC Comments pp. 3-5.

<sup>5</sup> SoCalGas Comments, pp. 9-10.

Title 17 of the California Code of Regulations § 95893(d)(3)<sup>6</sup> states

[a]llowance value, including any allocated allowance auction proceeds, obtained by a natural gas supplier must be used for the primary benefit of retail natural gas ratepayers of each natural gas supplier, consistent with the goals of Assembly Bill 32 (AB), and may not be used for the benefit of entities or persons other than such ratepayers of each natural gas supplier, consistent with the goals of AB 32.

In addition to the language above, the regulation also states, “Proceeds obtained from the monetization of allowances directly allocated to public utility gas corporations shall be subject to any limitations imposed by the California Public Utilities Commission...”<sup>7</sup> Therefore, it would appear the Commission has the authority to direct the use of these funds. Moreover, the intent of AB 32 is clear – reduce greenhouse gas (GHG) emissions to mitigate the risks associated with climate change. Natural gas is a fossil fuel that not only produces carbon dioxide, a significant GHG, but also methane, the primary component of natural gas and a far more potent GHG. Further, there are seven key GHG-emitting gas compounds covered under AB 32, and the second “most important” compound listed is methane (CH<sub>4</sub>)<sup>8</sup> – the primary component of natural gas. Therefore, these funds will be used for the “primary benefit” of natural gas ratepayers insofar as all natural gas ratepayers will receive climate and air quality benefits through the GHG emissions reduction implemented through WNDRR.<sup>9</sup>

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<sup>6</sup> See CCR § 95893(d)(2) and (3).

<sup>7</sup> See CCR § 95893(d)(2)

<sup>8</sup> GHGs Descriptions & Sources in California, *available at* <https://ww2.arb.ca.gov/ghg-descriptions-sources>.

<sup>9</sup> “Gas appliances emit a wide range of air pollutants, such as carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>, including nitrogen dioxide (NO<sub>2</sub>)), particulate matter (PM), and formaldehyde, which have been linked to various acute and chronic health effects, including respiratory illness, cardiovascular disease, and premature death.” Effects of Residential Natural Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California, UCLA Fielding School of Public Health, Department of Environmental Health Sciences, April 2020, *available at* <https://ucla.app.box.com/s/xyzt8jclixnetiv0269qe704wu0ihif7>.

SCE disagrees with PG&E that the WNDRR program should be funded by the electric corporations as part of the Public Purpose Program (PPP).<sup>10</sup> SCE believes that the gas cap and trade allowance is an appropriate funding source for the WNDRR program, as building decarbonization is identified as an “allowable use” of natural gas Cap-and Trade allocations.<sup>11</sup>

**2. SCE disagrees with SoCalGas’ Reasons for Including Gas Alternatives in the WNDRR Program.**

SCE disagrees with SoCalGas’ focus on a hypothetical scenario where a new home does not install air-conditioning (A/C).<sup>12</sup> WNDRR is a new construction program, and the 2009 Residential Appliance Saturation Survey (RASS) showed a clear trend towards increasing central A/C prevalence in newer home vintages, with over 90% of new single family homes including central A/C statewide post-2000. For the remaining small percent of new homes, as California temperatures continue to warm due to climate change, more people would likely adopt A/C to remain comfortable and avoid adverse health impacts with heat stress. This would result in A/C adoption trends that would increase even further beyond the 90+% trend set since 2000. Electric heat pumps provide climate resiliency and adaptability to the WNDRR participants that have been most harmed by climate change.

SCE disagrees with SoCalGas’ argument narrowly focusing on residential electricity consumption that produces more GHG emissions than burning natural gas in the home during early morning and evening hours.<sup>13</sup> The rate of emissions is a piece of the overall GHG emissions calculations, and GHG savings across all climate zones and vintage types, including new construction, ranging from 33-56% in 2020, increasing to 52-72% in 2030 and 76-88% by

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<sup>10</sup> PG&E Comments, p. 11.

<sup>11</sup> Electrical Distribution Utility and Natural Gas Supplier Allowance Allocation *available at* <https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program/allowance-allocation/edu-ngs>.

<sup>12</sup> SoCalGas Comments, p. 4.

<sup>13</sup> *Id.*, p. 5.

2050.<sup>14</sup> This analysis includes the impact of hourly electric emission factors and emissions from refrigerant leakage. This analysis also includes when gas lines have to be run to a home to power just a couple of gas appliances. The result is not only the climate-warming GHG emissions from burning natural gas in the home, but also the methane leakage that occurs over the system of pipelines that are needed to deliver gas to the home. SCE also notes that, in 2023, the California Air Resources Board (CARB) rules for lower Global Warming Potential (GWP) refrigerants will be in effect for air conditioning, further reducing heat pump's GHG emissions.<sup>15</sup> These savings are not included in the above analysis.

SCE disagrees with SoCalGas' narrow focus on the cost of electricity compared with the cost of natural gas, and the upfront cost of electrification compared with the big picture of customer's lifecycle costs.<sup>16</sup> For new construction, 100% of all-electric new construction single family and low-rise multifamily homes that include air conditioning show lifecycle savings.<sup>17</sup> The GreenTech Media article SoCalGas references<sup>18</sup> is for a retrofit scenario, which is not applicable to WNDRR, and actually supports customer appreciation for heat pumps.<sup>19</sup>

The Commission should reject SoCalGas' short-sighted comments regarding Public Safety Power Shutoffs (PSPS), which are an attempt to mask the bigger issue – that the effects of climate change are no longer in the indeterminate future, but upon us now. The

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<sup>14</sup> Energy + Environmental Economics (E3), *Residential Building Electrification in California* (April 2019), available at [https://www.ethree.com/wp-content/uploads/2019/04/E3\\_Residential\\_Building\\_Electrification\\_in\\_California\\_April\\_2019.pdf](https://www.ethree.com/wp-content/uploads/2019/04/E3_Residential_Building_Electrification_in_California_April_2019.pdf).

<sup>15</sup> HFC Reduction Measures Rulemaking, available at <https://ww2.arb.ca.gov/our-work/programs/hfc-reduction-measures/rulemaking>.

<sup>16</sup> SoCalGas Comments, p. 5.

<sup>17</sup> Residential Building Electrification in California, Energy + Environmental Economics (E3), April 2019, available at [https://www.ethree.com/wp-content/uploads/2019/04/E3\\_Residential\\_Building\\_Electrification\\_in\\_California\\_April\\_2019.pdf](https://www.ethree.com/wp-content/uploads/2019/04/E3_Residential_Building_Electrification_in_California_April_2019.pdf).

<sup>18</sup> SoCalGas Comments, pp. 5-6.

<sup>19</sup> Green Tech Media article: *What Does It Take to Electrify Everything in Your Home* (April 2018) available at <https://www.greentechmedia.com/articles/read/what-does-it-take-to-electrify-everything-in-your-home> The article stated: "The old wall-mounted gas furnace didn't keep the bedrooms warm. Going from that to the heat pump was like, This is amazing. The house is comfortable."

continued use of fossil fuels, such as natural gas, will only exacerbate this existential threat by producing carbon dioxide and methane that collects in the atmosphere, trapping heat radiation that warms up the planet, and causing extreme weather and increasing wildfires.<sup>20</sup> California is at the intersection of climate mitigation and climate adaptation – strong action is needed on both fronts. The “new normal” of wildfires requires steps to protect our customers and our communities from extreme weather, and the Commission needs to strengthen its resolve to foster the transition to clean energy, and continue moving toward the elimination of fossil fuels. Therefore, California must take aggressive steps to reduce carbon dioxide and methane emissions from natural gas to help reduce the risk of wildfires and achieve its long-term climate goals.

Further, SoCal Gas conflates old gas equipment with new construction. All modern gas appliances have electronic ignitions that require electricity to operate and many electric controls and fans. Thus, gas equipment will not be any more resilient than electric appliances during a power outage. While most older models of gas stoves can be lit manually during a power outage, certain models of newer gas ranges are made with a safety feature called an interlock that prevents the burner from being manually lit. The purpose of an interlock is to prevent hazardous gas leaks by completely cutting off gas flow to the burners in the event of an electrical outage or other situation where the stove cannot be lit by the igniter, as a safety measure. Gas ovens and furnaces also require electricity to operate, and gas tankless water heaters that are commonly installed in new dual fuel homes would also have an electronic ignition and control panel. Not only are open pilot lights or attempting to manually light gas equipment with a match inherently unsafe, but natural gas is highly explosive and extraordinarily dangerous in areas that are already prone to wildfires. On the other hand, energy storage is an important resiliency tool for customers at risk of PSPS. Battery storage for critical loads can help a customer ride through an outage, particularly if paired with solar. The Commission’s

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<sup>20</sup> SoCalGas Comments, pp. 6-7.



introduction in 2020 of generous Self Generation Incentive Program (SGIP) equity resiliency incentives for qualifying customers, in part based on high-fire locational attributes, points to a key resiliency role that electric technologies like energy storage can play under California's "new normal."<sup>21</sup> This program aligns with emerging research pointing to distributed and other energy storage as a critical resiliency pillar for both customers and the electrical grid.<sup>22</sup> Lastly, PSPS is a mitigation and not a long-term solution, and so we should not make long-term decisions based on it. With the improvements that SCE has made in PSPS protocol, grid hardening, and situational awareness, SCE also expects to reduce the scope, duration, and impact of PSPS.

SCE disagrees with SoCalGas that the gas system's importance to meeting California's economy-wide GHG goals means gas technologies should be incentivized for residential new construction through WNDRR. SCE's Pathway 2045 assesses that renewable natural gas would best be suited for hard-to-reach applications like high-heating industrial applications, but is not the least-cost solution for a vast majority of residential and commercial applications.<sup>23</sup> The California Energy Commission's study supports High Building Electrification at similar residential and commercial Building Electrification adoption targets to Pathway 2045 is cheaper for California than no Building Electrification by \$8-20 billion. See figure below.<sup>24</sup>

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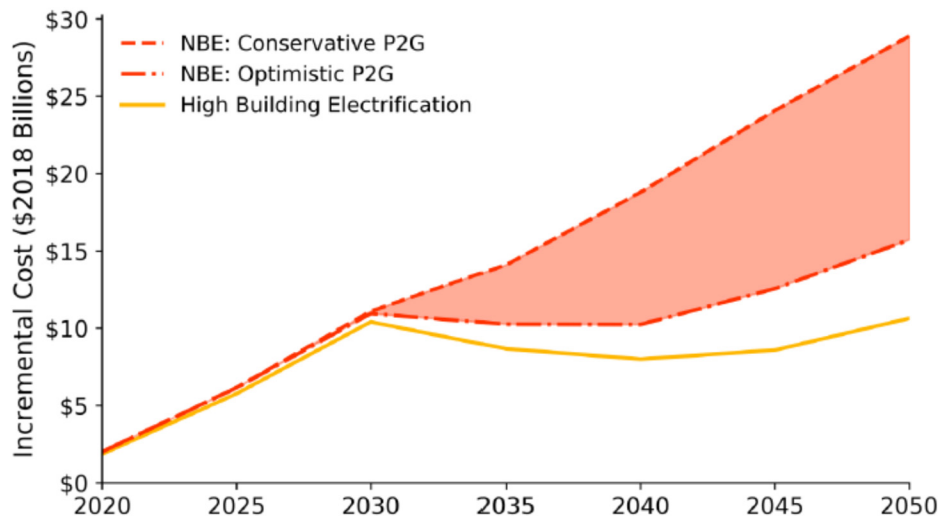
<sup>21</sup> D. 20-01-021, p. 9.

<sup>22</sup> Naomi Wheeler, *Fire, Wind, and Waves: Grid Resilience Threats and Opportunities in California and New York*, U.C. Berkeley (July 2020) p. 6, *available at* <https://www.law.berkeley.edu/wp-content/uploads/2020/08/Resilient-Coasts-Naomi-Wheeler.pdf>.

<sup>23</sup> Pathway 2045, *available at* <https://www.edison.com/home/our-perspective/pathway-2045.html>.

<sup>24</sup> CEC Low Carbon Future study, *available at* <https://ww2.energy.ca.gov/2019publications/CEC-500-2019-055/index.html>, Figure 12, p. 36.

**Figure II-1**  
Economy-wide Annual Net Costs, Relative to Current Reference Policy Scenarios



P2G = Power-to-Gas

SCE notes that the High Building Electrification scenario is conservative because it assumes all the gas infrastructure continues to be paid for, despite declining throughput. The total cost for this scenario could be lower if gas distribution system costs were reduced.

SCE disagrees with SoCalGas' claim that because customers have not chosen all-electric homes in the past, that this "indicate[s] that most customers would not choose all-electric homes." However, a 2020 poll shows that 70% of Californians would prefer their future appliances be powered by electricity increasingly generated from clean and renewable sources like wind and solar rather than gas. These results are even more important considering that 62% of those polled were unfamiliar with heat pump appliances for water and space heating, suggesting those polled are unaware of heat pump's significantly improved performance over standard electric resistance technologies, yet they still chose electricity over gas.<sup>25</sup>

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<sup>25</sup> See Memorandum from California Voter Views of Building Decarbonization , dated March 9, 2020 and available at <https://fm3research.com/wp-content/uploads/2020/03/California-Electrification-Survey-Results-Memo.pdf>.

**3. SCE supports multiple parties' positions to limit gas participation in WNDRR program.**

Specifically, SCE agrees with the Public Advocates Office (Cal Advocates) in prioritizing funds to support decreasing the size of the natural gas distribution network,<sup>26</sup> agrees with NRDC/Sierra Club that the Commission should ensure no competing programs rewards for rebuilding with gas,<sup>27</sup> and agrees with SMUD that the Commission should eliminate the “right of service” for gas where some majority of customers to be served construct all-electric.<sup>28</sup> Following these recommendations will avoid the expansion of unnecessary natural gas investments that could become stranded. The Commission should preclude programs that promote GHG-emitting options from competing with WNDRR, except in extenuating circumstances where full electrification is not feasible.

**4. SCE agrees with PG&E that the Commission should allow IOUs to issue a contract for 2021.**

SCE agrees with PG&E that there is a pressing need to quickly stand up to a broader natural disaster rebuild program for customers in California.<sup>29</sup> Because a full solicitation is needed to find the third-party program implementer, customers are unlikely to be able to participate in the program by next year if this option is adopted. PG&E recommends that “IOUs be allowed to issue a contract for 2021 only, following their own internal contracting processes, such that customers can participate in the WNDRR program before a full solicitation is conducted and a larger contract is awarded for the Statewide offering.”<sup>30</sup> SCE supports PG&E’s recommendation that the Commission allows IOUs to leverage existing implementation of similar programs through direct contracts until WNDRR is ready for statewide implementation.

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<sup>26</sup> Cal Advocates Comments, p. 7.

<sup>27</sup> NRDC/Sierra Club Comments, p. 6.

<sup>28</sup> SMUD Comments, pp. 6-7.

<sup>29</sup> PG&E Comments, p. 13.

<sup>30</sup> *Id.*

Doing so will serve customers impacted by recent wildfires without compromising finding a suitable long-term statewide program implementer for the ten-year program.

**C. Providing an Incremental Baseline Allowance to Customers with Electric Water Heating is Statutorily Permissible.**

The Utility Reform Network (TURN's) and PG&E's concerns about whether staff's incremental baseline allowance proposal is statutorily permissible are misplaced.<sup>31</sup> First, both TURN's and PG&E overlook the fact that Cal. Pub. Util. Code § 739.9(c) clarifies that a baseline tier is not statutorily required for TOU rates. As the Commission found in D.15-07-001:

The clear language of Section 739.9(c), however, has an exception for the TOU rate structure as described in Section 745. Section 745, the time variant pricing exception including TOU rates, only requires a baseline tier for particular customers, such as medical baseline customers. Thus, based on the clear language of the statute, we find that a baseline tier is not statutorily required for default TOU rates.<sup>32</sup>

As such, no matter how Cal. Pub. Util. Code §739(g) is interpreted, there is no statutory prohibition to providing an incremental baseline allowance to residential electric water heater customers taking service on TOU rates since the baseline allowance is optional in a TOU rate structure to begin with.

As for customers taking service on tiered rates, TURN's and PG&E both recognize that Cal. Pub. Util. Code §739(g) authorizes the Commission to experiment with "alternative gas or electrical rate schedules for the purpose of achieving energy conservation." Providing an incremental baseline allowance to customers with heat pump water heaters (which SCE supports in lieu of providing the allowance for all types of electric water heaters) falls within the scope of §739(g).

First, providing such an incremental allowance promotes energy conservation because it will encourage the adoption of heat pump water heaters, which are a highly efficient -

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<sup>31</sup> TURN's Comments pp.16-20, PG&E Comments pp. 18-19.

<sup>32</sup> D.15-07-001, p. 97.

reducing technology.<sup>33</sup> Second, the provision of this allowance is appropriately considered an experiment with an alternative electrical rate schedule. Contrary to PG&E's view, the provision of this incremental allowance as a rider to a customer's existing rate schedule and essentially converts that existing rate schedule into an alternative rate. As for TURN's concern that staff is impermissibly seeking to create a permanent rate rather than an experimental rate, nothing in the staff proposal would make the provision of the incremental baseline allowance permanent. In any case, as noted in its opening comments, SCE agrees that the provision of an incremental allowance should not be a long-term solution and that the Commission should instead define a limited period over which the provision of this incremental allowance would occur. A more appropriate long-term solution would be the use of a technology-agnostic rate that provides the opportunity for shifting load to lower cost and lower GHG emission periods of the day. Such a rate would avoid the need to create new rates as new GHG-reducing technologies are developed and enter the market.

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<sup>33</sup> The Staff Proposal notes on p. 57 the following: "Modern electric water heating equipment generally comes in the form of high efficiency HPWHs that achieve energy conservation both by reducing overall reliance on natural gas and by heating water mostly in the middle of the day rather than during peak hours, thus reducing the need for electricity provided by "Peaker" power plants while utilizing electricity when solar penetration is higher and the GHG intensity of each kWh consumed is lower."

**III.**

**CONCLUSION**

SCE appreciates the opportunity to provide these written comments to the Commission.

Respectfully submitted,

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